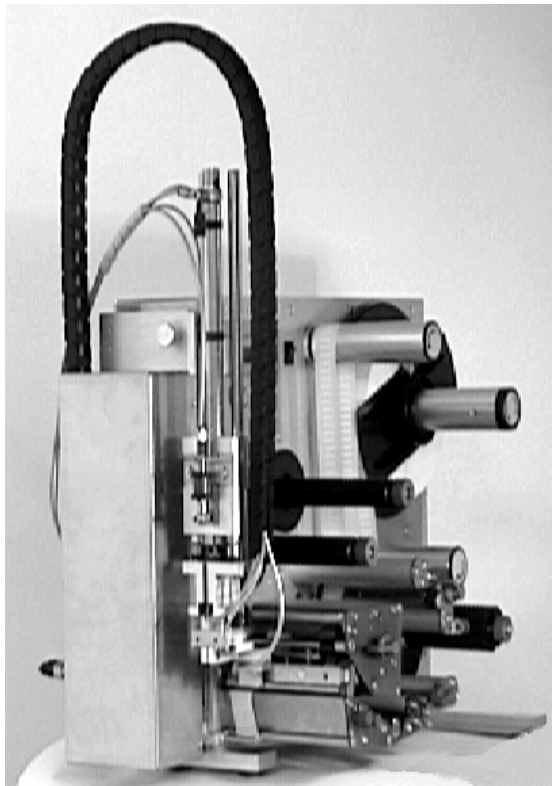


Tamp Applicator with Lift and Turn Cylinder Type 4200

Operating Instructions

Edition 3/03



Tamp Applicator with Lift and Turn Cylinder Type 4200



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1. Product Description

Function

The Tamp Applicator with Lift Cylinder Type 4200 is an accessory to the **Hermes** label printer for automatically applying a small, printed label onto the product. The labels could be applied parallel to the print line (**0°-position**) as well as across to the print line (**90°-position**). The labels are transferred with a pad, by two compressed-air driven pneumatic cylinders. A lift cylinder carries out the vertical movement of the pad between the dispense edge and the product to be labelled and the turn cylinder provides the turning movement of the pad between the 0°-position and the 90°-position. All movements are controlled by sensors.

The control unit of the applicator is connected to the **Hermes** on its SPI interface using the peripheral connector for cab-applicators on the front side of the printer.

For operation in a networked system the applicator's PLC (programmable logic control) interface with potential free inputs and outputs can be used.

Applying Cycle

Take-over the Labels

Depending on the label material (size, type of the labels) there are two ways to take-over the labels. They are distinguished between flying take-over (variation A) and contact take-over (variation B).

All supplied label applicators have passed a previous run at the factory. Therefore, the basic adjustments which are necessary for the operation of the device have been carried out. In that case the applicator is set on variation A.

At request of the customer the applicator can preconfigured to work with the customer's supplied sample labels.

However, the applicator can just as easily be set up or changed in the field to work in either configuration.

To change between variation A and B;

1. Setting the DIP-switch at the manifold to the appropriate variation.
2. Adjusting the vertical and horizontal distance between pad and dispense edge.

Variation A

The pad is in starting position when the lift cylinder is situated in the upper position and the turn cylinder in the 0°-position. The starting position and the position for take-over the labels are identical. In this position the rear edge of the pad (1) is located about 1 mm above the dispense edge (3) of the printer.

The label is printed and fed forward so far that the label (2) is removed from the liner completely. So the label (2) can be taken from the pad (1). While feeding, the vacuum at the pad and the supporting air at the blow tube are switched on.

When the print of the label is finished and the label (2) is taken from the pad (1) the supporting air is switched off. The vacuum sensor checks whether the label (2) is situated completely on the pad (1). Then the pad is swung to the 90°-position.

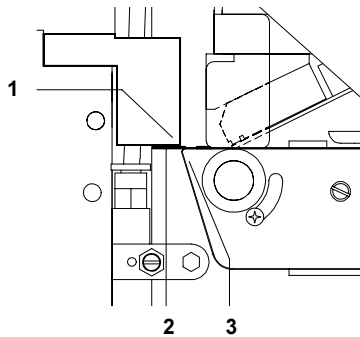


Fig. 1a Variation A of Take-over the Labels

Variation B

Mainly, this variation is used for very small labels, for example label size 12x4.

The pad is in starting position when the lift cylinder is situated in its upper position and the turn cylinder in the 90°-position. The starting position and the position for take-over of the labels is not identical. The label is printed and fed forward so far that the rear edge of the label still sticks on the liner. So the label remains at the dispense edge of the printer. The vacuum at the pad is switched on. When the print of the label is finished the pad (1) is swung to the 0°-position and pushed forward to the dispense edge (3) by moving down the lift cylinder. The lower position sensor signals when the dispense edge (3) is reached. The supporting air is switched on and pushes the label against the pad. The label is sucked on the pad by the vacuum. The vacuum sensor checks whether the label (2) is situated completely on the pad (1). Then the lift cylinder moves up and the label is removed from the liner. The supporting air is switched off. The pad is swung to the 90°-position.

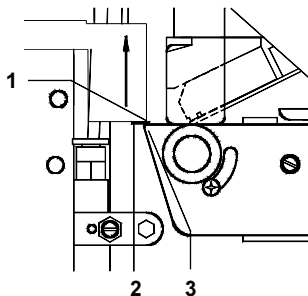


Fig. 1b Variation B of Take-over the Labels

Application of the Labels

The downward movement of the pad is carried out in the **90°-position**. When applying the labels in the **90°-position** the pad is moved to the labelling position without interruption. When applying the labels in the **0°-position** the pad is moved down for a defined distance, swung to the 0°-position and then moved into the **labelling position**. This position is confirmed by the labelling position sensor. Here, the label is tamped onto the product. While the pad is moving back, the vacuum sensor checks whether the label has been removed from the pad. Depending on the method of take-over the labels, the movement of the turn cylinder is carried out accordingly. The applying cycle is finished.

Positioning of the Labels

The labels could be applied parallel to the print line (**0°-position**) as well as across to the print line (**90°-position**).

The take-over of the labels is carried out in the 0°-position for both types of applying. The following movements are different :

0°-Applying

1. Turning into the 90°-position
2. Moving down
3. Stop
4. Turning into the 0°-position
5. Moving down
6. Applying
7. Moving up
8. Stop
9. Turning into the 90°-position
10. Moving up
11. Turning into the 0°-position

90°-Applying

1. Turning into the 90°-position
2. Moving down
3. Stop
4. **not any** movement
5. Moving down
6. Applying
7. Moving up
8. Stop
9. **not any** movement
10. Moving up
11. Turning into the 0°-position

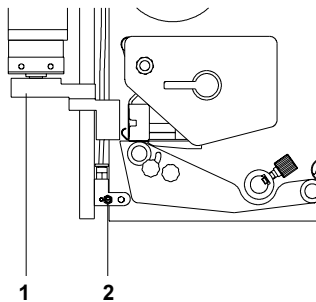


Fig. 1c Position of the pad after take-over the label

The stop is set during the movement process to guarantee a correct carrying out of the turning of the pad. It is situated about 2 - 3 cm underneath of the blow tube (2). The location of the stop depends on the setting of the sensor. During the 90°-applying the stop is not recognized by the user.

Instructions for Putting Up



CAUTION !

See to it that the product to be labelled (1) is situated underneath of the stop (point 3 of the movement process).

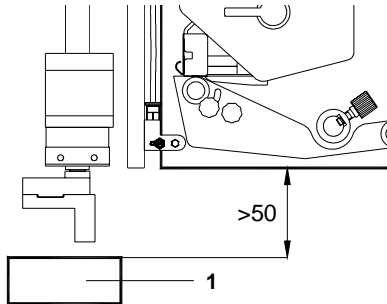


Fig. 1d Horizontal minimum distance



CAUTION !

By 0°-applying an area for the turning movement (point 4 of the movement process) and the following movement downwards (point 5 of the movement process) of the pad (2) to the product to be labelled (1) has to be free.

That means mainly that the place to put up the printer has not to go into the hatched area.

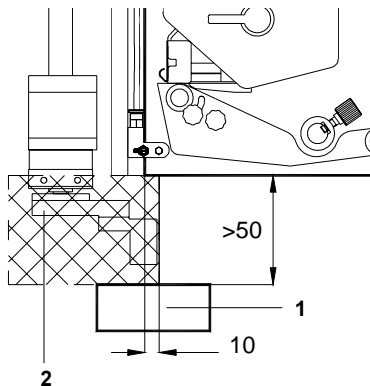


Fig. 1e No area for putting up the printer

Technical Data

Label width :	10-50 mm (3/8" - 2")
Label height :	4-20 mm (5/32" - 3/4")
Air pressure :	filtered, 5 µm 4 bis 6 bar
Turn Cylinder :	turning angle 90°
Lift Cylinder :	lift height 220 mm (8 3/4") or lift height 300 mm (12") dependent on the type of applicator

2. Equipment Supplied

- Tamp Applicator with Lift- / Turn Cylinder
- Knurled Screw

3. Safety Instructions



CAUTION !

Make sure that the Hermes is disconnected from the power supply and the valve at the service unit as well as the shutoff valve at the applicator are closed, while installing the delivered components.



CAUTION !

In operation, moving parts are easily accessible. Therefore, keep long hair, loose clothes, and jewellery distant. Before any manipulations in those areas, close the shutoff valve.



CAUTION !

Do not try to manipulate or repair parts that are not described in the manuals of the tamp applicator or the Hermes.

4. Installation

Installing the Tamp Applicator

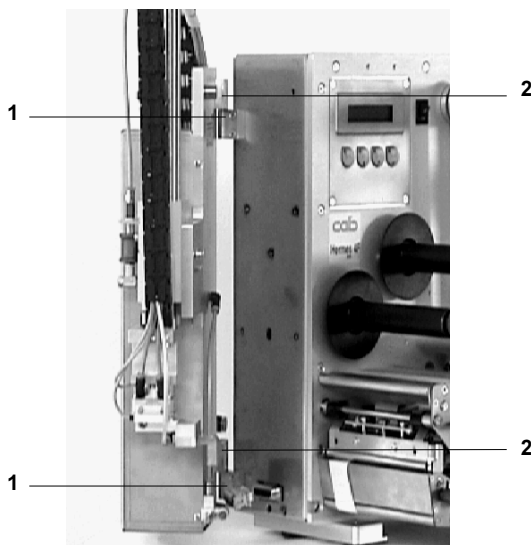


Fig. 4a Installation of the Tamp Applicator

There are two hinges (1) on the Hermes for mounting the applicator to the **Hermes**.

1. Hang the applicator into the hinges (1) of the Hermes.
2. Turn the applicator towards the **Hermes** as far as necessary to plug the connector of the applicator-electronics into the peripheral connector for cab-applicators on the front of the printer.

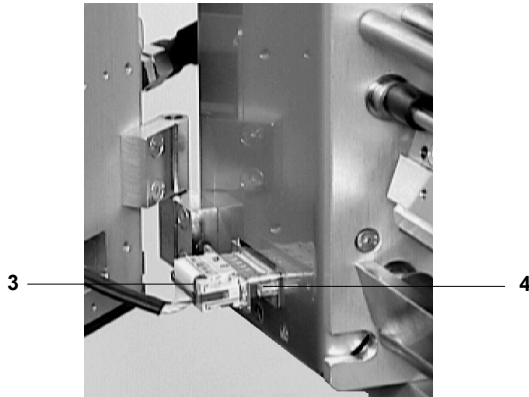


Fig. 4b Installation of the Tamp Applicator

3. Contact the connector (3) of the applicator-electronics to the peripheral connector (4) of the Hermes.

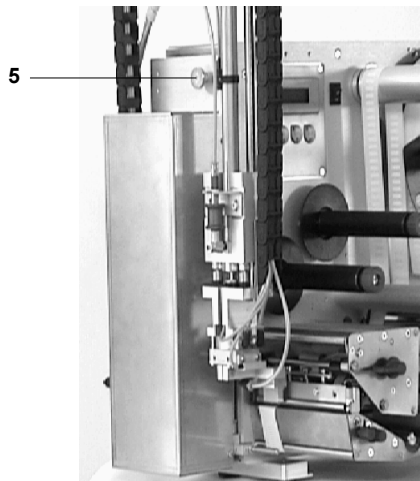


Fig. 4c Installation of the Tamp Applicator

4. Attach the applicator to the Hermes with the knurled screw (5) which is supplied with the applicator.

Connections



Fig. 4d Connections

1. Prepare the connections to the power supply and to the computer as described in the **Hermes** manual.
2. Connect the PLC interface by using the 15-pin connector (3) (for further details see appendix A).
3. Make sure that the shutoff valve (2) is closed (red knob on the valve is turned vertical).
4. Connect the compressed air at the push-in-fitting (1) and adjust the required operating pressure (4-6 bar).



CAUTION !

Use only filtered compressed air (5 µm) to operate the applicator.

5. Switch on the power supply of the **Hermes**.
6. Open the shutoff valve (2 / red knob is turned horizontal).

5. Adjustments

All label applicators have passed a previous run at the factory. It may be necessary to do some fine tuning when the applicator is installed. This refers mainly to parameters, which are significant as part of a networked system.

5.1. Mechanical Adjustments

Adjustment of the Labelling Position Sensor

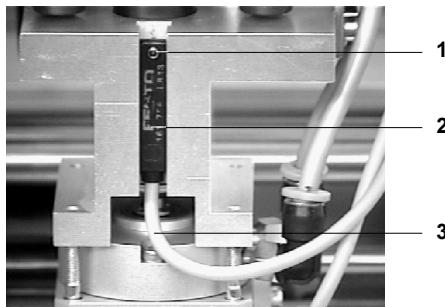


Fig. 5.1a Adjusting the Labelling Position Sensor

The labelling pressure for tamping the label onto the product can be adjusted by moving the labelling position sensor.

1. Loosen the screw (1).
2. Shift the sensor (2) by moving the cable (3).
Shifting the sensor upwards will reduce the labelling pressure, shifting downwards will increase it.
3. Tighten the screw (1).

Tuning of the Blow Tube

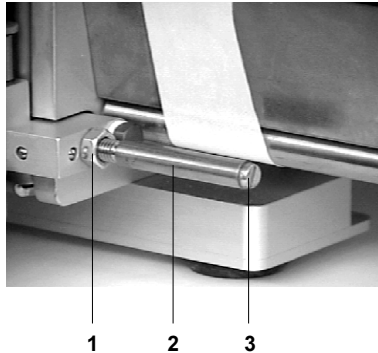


Fig. 5.1b Tuning the Blow Tube

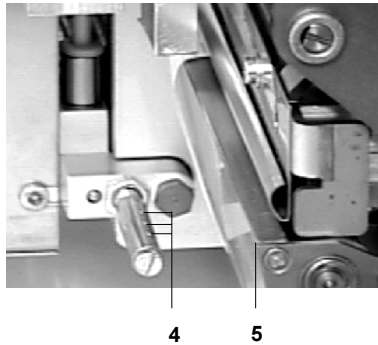


Fig 5.1c Tuning the Blow Tube

The blow tube (2) for the supporting air can be rotated around its longitudinal axis.
By rotating the blow tube the direction of the air current is changed (adjusting the blow openings to the dispense edge (5) of the printer).

1. Loosen the lock nut (1) as well hold the slotted screw (3) with a screwdriver.
2. Adjust the tube (2) until the air current is aligned with the dispense edge (5) of the printer.
3. Tighten lock nut.

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5.2. Pneumatic Adjustments

Control Valves

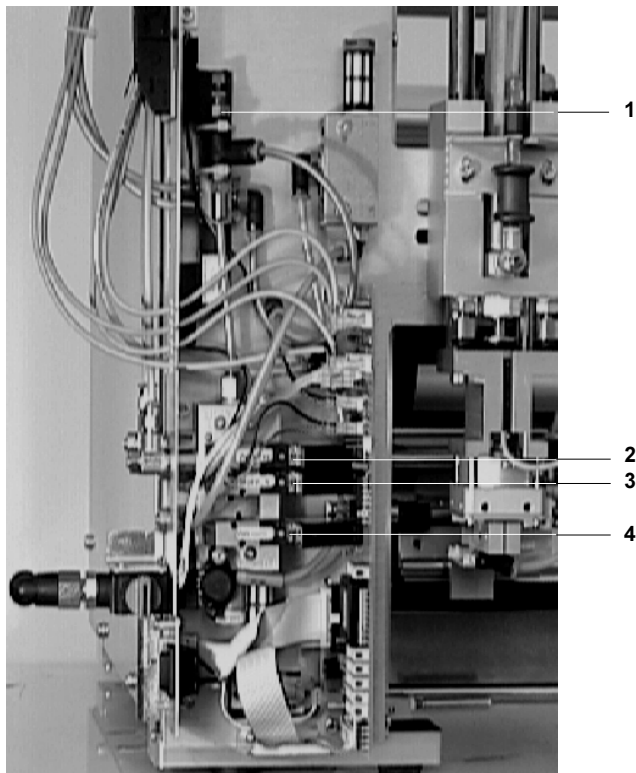


Fig. 5.2a Control Valves

To control the pneumatic process there are four electronically switched control valves on the manifold. After removing the applicator's cover they are accessible. To do this, loosen the screws at the cover, two on the left and two on the right.

The function of the valves are as explained below.

Lift Cylinder (1) :

Valve to control the lift cylinder.

Turn Cylinder (2) :

Valve to control the turn cylinder.

Supporting Air (3) :

Valve to switch on the supporting air at the blow tube.

Vacuum (4) :

Valve to switch on the vacuum nozzle and, consequently, controls the vacuum on the pad for picking up the label.

Slide Valve at the Lift Cylinder



Fig. 5.2b Slide Valve at the Lift Cylinder

The lift cylinder is additionally equipped with a slide valve (1), which can only be actuated manually.

By opening the slide valve (slide the ring upwards to the position 'bleed') it is possible to remove the pad from its upper position as the shutoff valve is closed and the applicator is switched off.

The slide valve should only be opened (bleed), if it is necessary to move the pad for service for example cleaning the pad, or removing fragments of labels.



CAUTION !

Pay attention to the pad while opening the slide valve. It should be swung away from the peel-off edge of the printer (90°-position).



CAUTION !

The slide valve must be closed during operation. Otherwise the lift cylinder can be moved without control, which can cause damages.

Throttle Valves at the Manifold

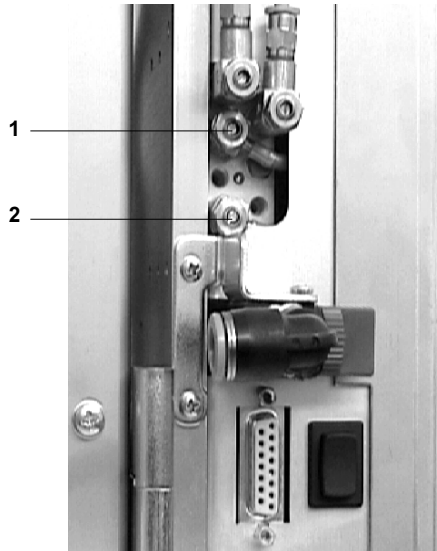


Fig. 5.2c Throttle Valves at the Manifold

Throttle valve to regulate the supporting air (1)

With this valve the supporting air to blow the label onto the pad can be adjusted.

Turn the throttle screw to adjust the valve. Turning clockwise will close the valve.

The valve has to be tuned in such a way, that the label is blown onto the pad without turning or swinging.

Throttle valve to regulate the vacuum (2)

With this valve the vacuum to suck the label onto the pad can be adjusted.

Turn the throttle screw to adjust the valve. Turning clockwise will close the valve.

The vacuum can be adjusted until the label totally sticks on the vacuum plate.

5.3. Selection of the Operation Mode

The tamp applicator can be operated in two different ways referring to the order of printing and labelling of the applying process. The applying process proceeds in a cycle. So it is possible to subdivide the whole process into two cycles.

A mode can be selected through actuating a DIP switch. All operating modes can be adjusted by setting different time delays.

Furthermore, there is a special mode using the pre-dispense key for adjusting, etc.

Half Cycle 'Printing'

- Printing of a label, peeling it off of the liner.
- Vacuum at the pad and supporting air (blow tube) are switched on.
- Supporting air is switched off when the print of the label is finished and the label is picked up completely from the pad.

Half Cycle 'Labelling'

- Moving the pad to the labelling position.
- The labelling position sensor signals when the labelling position is reached.
- Vacuum is switched off.
- Label is placed onto the product from the pad.
- Move the pad to the starting position.
- The sensor 'upper position' signals when the upper position of the lift cylinder is reached.

Operation Mode 'Printing / Labelling'

The print of a label is released by an external start signal (via PLC interface). Then the half cycles 'Printing' and 'Labelling' are carried out.

Operation Mode 'Labelling / Printing'

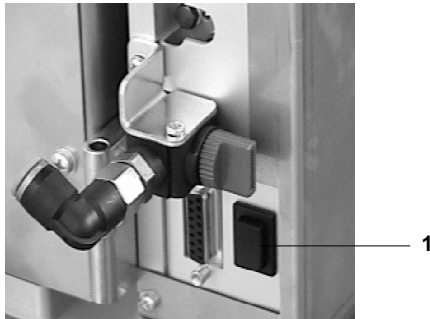


Fig. 5.3a Pre-dispense Key

Before starting the mode 'labelling / printing' the printing and picking up of the first label has to be released separately by pressing the pre-dispense key.

The pad with the printed label is in the starting position. The vacuum on the pad is switched on.

By an external start signal the half cycle 'labelling' is released.

Following the half cycle 'printing' is carried out.

Function of the Pre-dispense Key

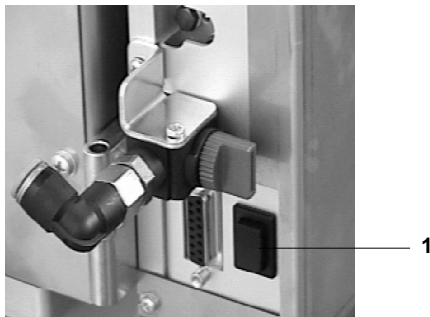




Fig 5.3b Pre-dispense Key

By pressing the pre-dispense key (1) the half cycles 'printing' and 'labelling' of the labelling process can alternately be released, provided that there is a print job.

If the label is removed from the pad manually after the half cycle 'printing', the half cycle 'printing' will be repeated when the pre-dispense key is pressed again.

If there is no print job, only the movements of the half cycle 'labelling' are carried out, when pressing the key.

The half cycle 'printing' of the labelling process can also be released by pressing the  key on the control panel of the printer. In that case, a blank label is picked up by the pad. That way, the whole labelling process can be simulated by alternately pressing the  key and the pre-dispense key without the need of a print job or a connection to a computer.

Setting the Operation Mode and the Delay Times

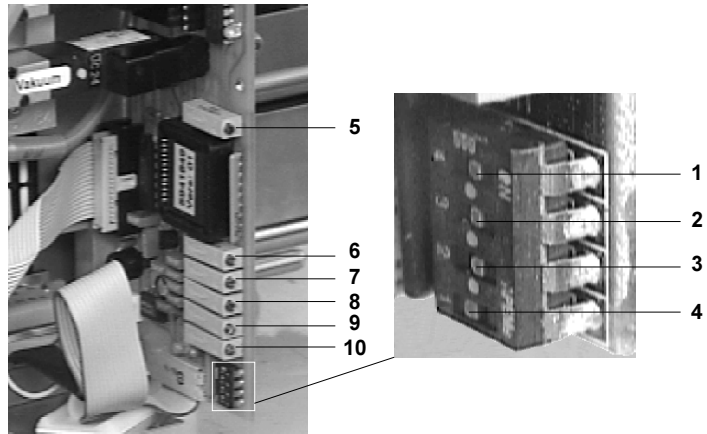


Fig. 5.3c Potentiometers and DIP-Switches

For best adaptation, the applicator offers several methods to adjust to the whole system to the required needs.

After removing the cover of the manifold, 6 potentiometers as well as 4 DIP switches become accessible by which the parameters can be set.

Potentiometer

Potentiometer 5 is sealed. Certain voltage settings are pre-adjusted at the factory and not to be changed by the user.

The potentiometers 6 - 10 offer the adjustment of the labelling process by changing certain time delays. If any one of the settings is changed the actual value is briefly shown in the printer display.

Potentiometer (6) : t_B - blowing time 0...2,5 s (delay)

The delay is used to set the time period which is necessary to stop the lift cylinder, so that it is possible to turn the pad from the 90°-position to the 0°-position or from the 0°-position to the 90°-position.

Potentiometer (7) : t_{SA} - switch-off delay supporting air 0...2,5 s

Delayed to the process of the label being picked up, the supporting air is switched off.

In many cases, after being picked up by the pad the label edge may still stick on the carrier ribbon. This may affect the accuracy of the label positioning or even cause faults in the labelling. Therefore, changing the air blow delayed can be useful to separate the label from the carrier ribbon and neatly place the label on the surface of the pad.

Potentiometer (8) : s_{SE} - switch-on delay supporting air 0...20 mm

The supporting air from the blow tube is not immediately switched on when the print of the label is released but delayed. The air is switched on, when the label has covered a certain distance s_{SE} .

This delay helps to prevent a turning or swinging at the front of the label and, consequently, avoids faults when the label is being picked up from the printer.

The parameter measures the distance covered by the label before the supporting air is switched on, and it is not depending on the print speed. This way, the position of the label can be determined until the air is switched on.

Potentiometer (9) : t_{SP} - locking time 0...2,5 s

All start signals coming in following the first start signal are ignored when they arrive within the locking time t_{SP} .

Potentiometer (10) : t_{VS} - start delay 0...2,5 s

The parameter t_{VS} determines the time period between the start signal and the start of the labelling process. With this delay it is possible to delay the release of the start signal, thus changing the placement of the label on the product if the product is moving, such as when on a conveyor.

DIP-Switches


With the DIP-switches (1-4) the operation mode as well as the firmware of the applicator can be determined.


DIP-Switch	Parameter	ON	OFF
1	no function		
2	Applicator	variation A	variation B
3	Operation mode	printing / labelling	labelling / printing
4	Save potentiometer settings	no	yes

If switch No. 4 is OFF the setting of the potentiometers are automatically stored in the printer when switched on. Therefore, in case the applicator has been changed (e.g. in case of an accident) the settings are still saved and can be transferred to a replacement (see also Print info display).


Print Info Display

Hermes offers a convenient option for recalling information about the configuration and hardware problems in the printer info display (see also Operator's Manual **Hermes** section 11).

First, press the  key to switch from ONLINE mode into OFFLINE

mode. Next, to recall the printer information desired, press the  key to see the first of five display pages available. Press key repeatedly to view the other pages. When an applicator is installed, this display is extended by another five pages. After the standard pages, the following parameters are shown :

- start delay
- locking time
- switch-off delay supporting air
- blowing time (delay)
- switch-on delay supporting air.

When the reviewing is completed, switch back into ONLINE mode by pressing the  key.

In case the applicator has been changed (e.g. in case of an accident) the stored parameters can be viewed as described above and the new device can be adjusted accordingly. For this purpose DIP-switch 4 on the new applicator must be 'ON' when switching on the device for the first time.

6. Operation



NOTICE !

Check all external connections before starting to print.



NOTICE !

It is recommended to swing the applicator away from the printer before loading the labels or the transfer ribbon.

1. Make sure that the media is loaded corresponding to the instructions in the section 'Media Loading' of the **Hermes** Operator's Manual.
2. Check that the pad is not covered by the label when switching on the device.



CAUTION !

Check that the slide valve at the lift cylinder is in the 'operate' position by starting the labelling cycle. Otherwise the lift cylinder can be moved without control. This fact can cause damages.


3. Switch on the power supply of the **Hermes**.
4. Open the shutoff valve.
5. Switch into the present mode of the **Hermes** during programming and set the peel position to remove the labels from the carrier ribbon corresponding to the taking of the labels.

Variation A : about 3.5 mm to remove the label from the carrier ribbon.


Variation B : about 0 mm to keep the label on the carrier ribbon.



NOTICE !

Before starting the first print job press the  key on the printer.

This generates a synchronous running. Remove the processed labels manually. After a few seconds the printer carries out a brief rewind and the edge of the next label is positioned at the print line.

This synchronizing also has to be carried out when the print job has been interrupted with the  key.

6. Start the print job.
7. Start the labelling process via PLC interface.

If an error occurs while the applicator is operating, this is shown on the display of the **Hermes** (for types of errors and how to treat them see appendix B).

Appendix A - PLC Interface

For use in a networked system the applicator is equipped with a PLC interface to start and interrupt the labelling process. It also passes on state information as well as error messages of the applicator to the system control.

The interface has a 15 pin SUB-D connector.

Pin Assignment of the PLC Interface

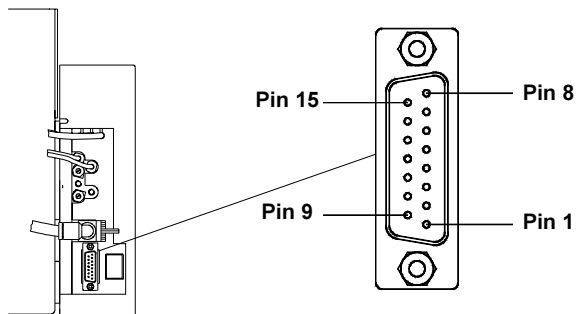


Fig. A-1 Connector of the PLC-Interface

PIN	Signal	Direction	Function
1	XSTRT	input	start signal
2	XSTP	input	stop signal
3	XDREE	input	90°-labelling
4	XDNB	output	printer not ready
5	XEDG	output	no existing print bjob
6	XSAA	output	general error message
7	XSOE	output	lift cylinder in upper position
8	GND	output	grounding (0V)
9	XSTRTR	(input)	start signal (reverse line)
10	XSTPR	(input)	stop signal (reverse line)
11	XDREER	(input)	90°-labelling (reverse line)
12	XSUE	output	pad in labelling position
13	XETF	output	applicator fault
14	RÜL		reverse line (for all output signals)
15	24P	output	operating voltage +24V, Si T 100mA

Table A-1 Pin Assignment of the PLC Interface

Circuit Diagrams of Input and Output

The **inputs** are optocouplers with a current limiting resistor of $2.4\text{k}\Omega$ in the input circuit.
For each signal X[IN] there is a separate reverse line X[IN]R via the plug connector. From that, the following matching pairs of signals result :

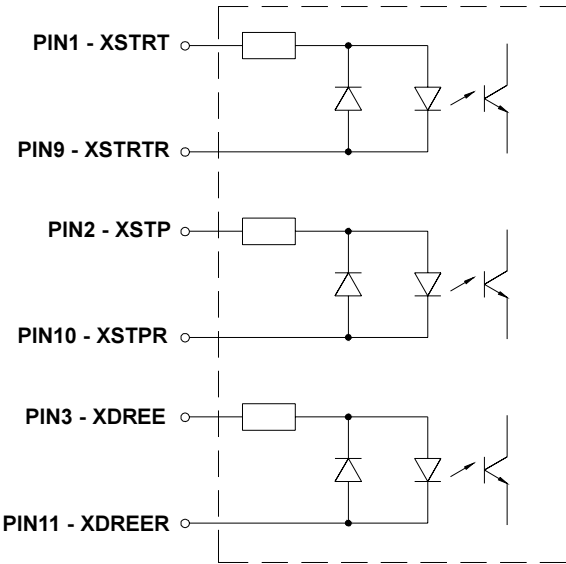


Fig. A-2 Circuit of the Inputs

All **outputs** are realized through solid state relays which outputs are connected among one another one-sided. The joint line is lead to the plug connector as RÜL signal.

The switch function of the outputs is to open or close the contact between the joint line RÜL and the respective output.

Electrical requirements : $U_{\max} = 42V$
 $I_{\max} = 100mA$

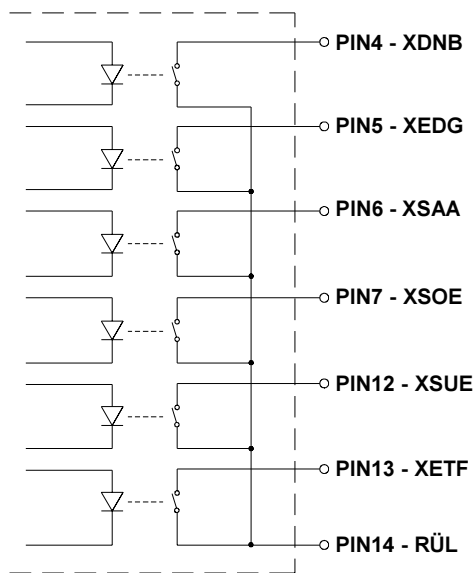


Fig. A-3 Circuit of the Outputs

Comments on the Signals

PIN1 - XSTRT - Start signal

This signal will release the start of the labelling process. It is active when a current flows between PIN1 and PIN9.

PIN2 - XSTP - Stop signal

The signal is active when a current flows between PIN2 and PIN10. It can release the following functions :

- to finish off the print of a label and its picking-up at the pad
- to interrupt or to stop the beginning of the labelling process
- to make the pad move back into the starting position
- to command the disregard of all following signals
- if the stop signal has been activated during the labelling phase, the display will show the message 'Host stop/ error'. (does not show message during print process)

PIN3 - XDREE - 90°-labelling

The signal is active when a current flows between PIN3 and PIN11. It can release the 90°-labelling.

PIN4 - XDNB - Printer not ready

This is an error message of the **Hermes** printer.

The details and type of error can be learnt from the printer display. ('Ribbon out'; 'Paper out'; 'No label')

In this state the contact between PIN4 and PIN14 is opened.

After error correction, the print of the last label will be repeated.

PIN5 - XEDG - No existing print job

State message.

There is no print job currently available.

In this state the contact between PIN5 and PIN14 is opened.

PIN6 - XSAA - General error message

General error message of both, printer and applicator.
This message is shown when one of the two errors either XDNB or XETF occurs. This signal is important in case that only one error signal of the applicator can be analysed from the system control.
In this state the contact between PIN6 and PIN14 is opened.

PIN7 - XSOE - Lift cylinder in upper position

The signal is active when the pad is in the upper position of the lift cylinder.
In this state the contact between PIN7 and PIN14 is opened.

PIN8 - GND - Grounding (0V)

PIN9 - XSTRTR - Reverse line of the start signal XSTRT

PIN10 - XSTPR - Reverse line of the stop signal XSTP

PIN11 - XDREER - Reverse line of the signal 90°-labelling

PIN12 - XSUE - Pad in labelling position

The signal is active when the pad is in its labelling position.
In this state the contact between PIN12 and PIN14 is opened.

PIN13 - XETF - Applicator fault

This is an error message of the applicator.

This message is shown when one of the following errors occurs at the applicator :

- pad has not reached the labelling position within 2s after the movement downwards of the lift cylinder
- pad has not reached the upper position within 2s after the movement upwards of the lift cylinder
- pad has not reached the 90°-position within 2s after the movement of the turn cylinder
- pad has not left the 90°-position within 2s after the movement of the turn cylinder
- a printed label has not been picked up by the pad properly or it fell down during the movement of the cylinder (message of the vacuum sensor)
- the label is still on the vacuum plate of the pad when the cylinder moves back up (message of the vacuum sensor)

The type of fault is shown in the display of the printer.

In this state the contact between PIN13 and PIN14 is opened.

After fault correction, the print of the last label printed before the fault occurred will not be repeated.

PIN14 - RÜL - Reverse line (for all output signals)

PIN15 - 24P - Operating voltage +24V, Si T 100mA

There is an operating voltage of 24V available on PIN15 provided from the applicator system.



CAUTION !

You must not apply any external voltage on PIN15 !

The operating voltage on the plug connector allows the use of the applicator without being part of a networked system. The start signal which is required for releasing the labelling process may be caused, for instance, by a suitable foot controlled switch with a 15 pin SUB-D plug.

Examples for Circuits to Creating a Start Signal

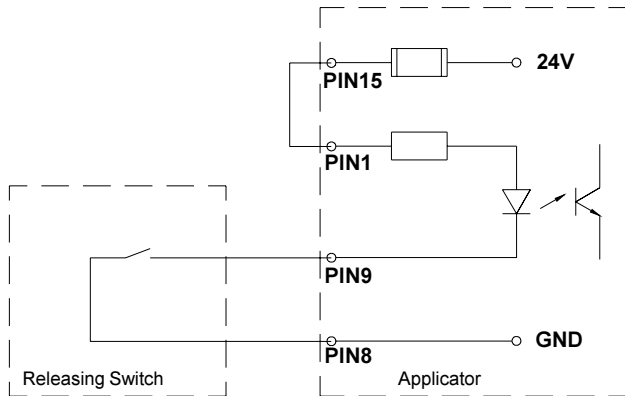
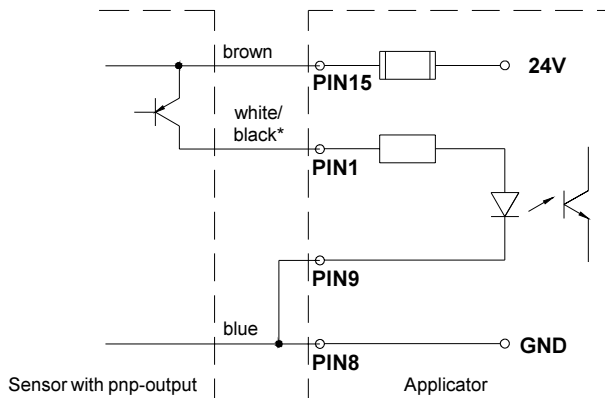
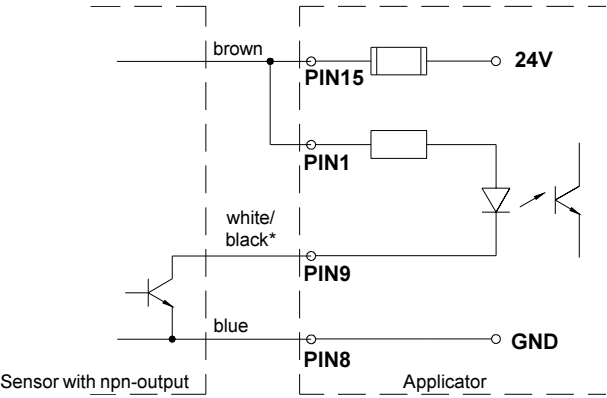


Fig. A-4 Example with releasing switch



* dependent on the used sensor

Fig. A-5 Example for an optical sensor with pnp-output



* dependent on the used sensor

Fig. A-6 Example for an optical sensor with npn-output

Appendix B - Error Messages

Error Messages of the Printer


Detailed information about printer errors (e.g. 'Paper out', 'Ribbon out', etc.), their causes and correction methods can be found in the Operator's Manual **Hermes** (Appendix C).



NOTICE !

With the installation of an applicator the error treatment expands. This means that after correcting the error and before the

correction is quit with the  key, an additional label feed must

be released using the  key. This synchronizes the process of printing and labelling. Possibly dispensed blank labels must be removed manually.

After quitting the error message the label that caused the error will be reprinted.

Error Messages of the Applicator

The following table gives an overview of error messages and their possible cause. It also suggests methods to resolve the problem. After error correction, always quit the error message of the applicator

with the  key.

To reprint the label where the applicator error occurred, a new print job must be released.

Applicator - Error Messages

Error message	Possible cause	Solution
Label not depos.	Label has not been placed onto the product; after cylinder has moved back the label still sticks on the vacuum plate of the pad	Label the product manually
Upper position	Pad has not reached the upper position within 2s after the lift cylinder has moved back Pad has left the upper position unauthorized Pad has not reached the 90°-position after the movement of the turn cylinder	Check the applicator for proper operation of its mechanics; Check if the slide valve is closed; Label the product manually (service)
Host stop / error	Labelling process has been interrupted by an XSTP stop signal via PLC interface	Label the product manually if necessary
Refl. sensor blk.	There has been no change of the switch state at the upper control sensor (at the cylinder) between the start of the labelling process and the signal from the labelling position sensor	Check the sensor (service)
Vac. plate empty	Label has not been picked up properly by the pad; or Label fell off the pad before it could be placed onto the product	If possible, place the 'lost' label onto the product manually; Otherwise stop print job and start again with adapted parameters (e.g. count)
Lower position	Pad has not reached the labelling position within 2s after the movement of the cylinder Pad has not reached the 90°-position within 2s after the turn cylinder has moved back	Check the applicator for proper operation of its mechanics; Check the labelling position sensor (service); Label the product manually (service)

Table B-1 Error Messages of the Applicator

Appendix C - Function of the LEDs of the Electronics

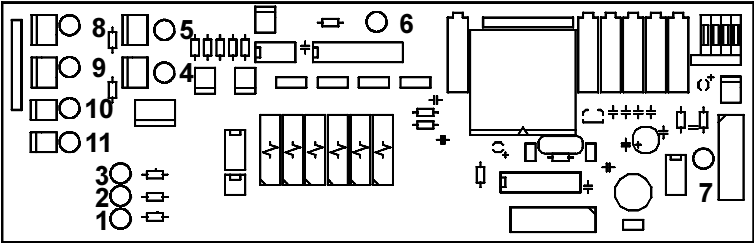


Fig. C-1 LED on the PCB

LED-No.	Colour	Function	Active state
1	green	PLC signal XSTRT	ON
2	green	PLC signal XSTP	ON
3	green	PLC signal XDREE	ON
4	red	Upper position sensor	ON
5	red	Labelling position sensor	ON
6	yellow	Label on the pad	ON
7	yellow	Operating voltage 5V	ON
8	red	Sensor pad in 90°-position	ON
9	red	Sensor for delay	ON
10	red	no function	
11	red	no function	

Table C-1 LED on the PCB

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EC-Conformity Declaration

Herewith we declare that the following described machine, from the design and style and as we sell it, complies with the relevant EC Safety and Health Requirements. This declaration will lose the validity if there are any changes of the machine or the purpose without our consent.

Description:
Applicator

Type:
**Tamp Applicator
with Lift and Turn Cylinder
Type 4200**

Applied EC Regulations and Norms:

- | | |
|--|---|
| - EC Machinery Regulations | 98/37/EU |
| - Machine Safety | EN 292-2:1991+A1:1995 |
| - EC Low Voltage Regulations | 73/23/EEC |
| - Data and Office Machine Safety | EN 60950:1992+A1:1993
EN 60950/A2:1993+A3:1995
+A4:1997 |
| - EC Electromagnetic Compatibility Regulations | 89/336/EEC |
| - Threshold values for the Interference
of Data Machines | EN 55022:1998 |
| - Limits for harmonic current emission | EN 61000-3-2:1995+A1:1998
+A2:1998+A14:2000 |
| - Limits of voltage fluctuation and flicker | EN 61000-3-3:1995 |
| - Immunity characteristics-
Limits and methods of measurement | EN 55024:1998 |

Signature for the producer:

cab Produkttechnik Sömmerda
Gesellschaft für Computer-
und Automationsbausteine mbH
99610 Sömmerda

Sömmerda, 01.10.01

A handwritten signature in black ink, appearing to read 'Erwin Fascher'.

Erwin Fascher
Managing Director